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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/558,932

01/19/2006

Yoshiaki Takagi

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6336

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7590

03/20/2008

WENDEROTH, LIND & PONACK, L.L.P.

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WASHINGTON, DC 20006-1021

EXAMINER

SANDERS, KRIELLION ANTONETTE

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

03/20/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/558,932	Applicant(s) TAKAGI ET AL.	
	Examiner Kriellion A. Sanders	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/05</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-10 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over WO 97/38236 to Seitz et al or Seitz et al, US Patent No. 6,524,681.

The US patent will be used for referencing the disclosures of the invention. Seitz et al. discloses a friction material for a friction facing member useful for transmitting torque that includes a backing having a front surface and a rear surface. A plurality of precisely shaped friction composites defining patterned friction coating are attached to the front surface of the backing. The precisely shaped friction composites include a plurality of friction particles dispersed in a binder. Patentee teaches that friction materials are used in a wide variety of different automotive applications such as for brake linings, brake pads, for torque converter

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clutches in automatic transmissions, synchronizer rings in manual transmissions, and in so-called "slipping" clutches.

The patterned friction coating of the invention is formed from a coatable binder precursor slurry comprising a plurality of friction particles and a resin, preferably a thermosetting resin. Examples of resins include, but are not limited to: phenol formaldehyde resins (i.e., phenolic resins) such as resole and novolac resins .

The friction material includes friction particles selected from the group of an organic material, a metallic material, a semimetallic material, an inorganic material, and mixtures thereof. More preferably, the friction particles comprise an organic material, even more preferably, the organic material comprises coke, wherein the coke is selected from the group of metallurgical coke, petroleum coke, coconut shell activated carbon, and mixtures thereof. Patentee indicates several suitable types of coke including metallurgical coke and petroleum coke. Coal derived cokes generally contain about 6% to about 16% ash. On the other hand, the petroleum coke particles generally contain less than about 5% by weight of inorganic materials other than carbon, such as sulfur and heavy metals such as nickel and vanadium.

For particularly preferred embodiments, the weight ratio of carbon particles/binder ranges from about one (1) to 5 parts carbon particles to one (1) part binder, with the preferred range being about 1.3 to 2 to one (1) part binder. One preferred friction particulate is granular carbon such as metallurgical coke or petroleum coke having generally irregular shapes. The particle size distribution of these carbon particles are given in the examples. Preferably, the friction particles consist essentially of carbon particles having an average particle size ranging from about 20

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micrometers to about 50 micrometers. Such carbon particles consist primarily of elemental carbon, and although primarily coke, may include carbon black or graphite.

The friction coating can further comprise optional additives, such as, for example, non-frictional fillers and fibers, pigments, dyes, and antistatic agents. Examples of useful non-functional fillers include cured cashew nut resin, cured phenolic particles, rubber particles (such as nitrile rubber particles), metal carbonates (such as calcium carbonate, chalk, calcite, marl, travertine, marble and limestone), calcium magnesium carbonate, sodium carbonate, magnesium carbonate), silica (such as quartz, glass beads, glass bubbles, glass fibers, flour), silicates (such as talc, clays (montmorillonite)), feldspar, mica, calcium silicate, calcium metasilicate, sodium aluminosilicate, sodium silicate), metal sulfates (such as calcium sulfate, barium sulfate, sodium sulfate, aluminum sodium sulfate, aluminum sulfate), gypsum, vermiculite, wood flour, aluminum trihydrate, metal oxides (such as calcium oxide (lime)), aluminum oxide, titanium dioxide) and metal sulfites (such as calcium sulfite).

In claim 11 patentee indicates that the friction particles may be carbon particles selected from the group consisting of coke, carbon black, graphite and combinations thereof.

See col. 3, lines 5-55, col. 5, lines 41-47, col. 8, line 55 through col. 9, line 37, col. 12, line 8 through col. 13, line 20, col. 16, line 49 through col. 17, line 18.

The components of the present invention are taught by the references. No patentable difference is readily ascertained. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to select any of the parameters of the patented invention and apply those parameters to derive a friction material, wet or not having a coke content ranging from 0.1 to 8.0 mass %.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kriellion A. Sanders whose telephone number is 571-272-1122.

The examiner can normally be reached on Monday through Thursday 8:30am-7:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kriellion A. Sanders/

Primary Examiner, Art Unit 1796

Kriellion A. Sanders
Primary Examiner
Art Unit 1796

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